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IN REPLY REFER TO:

CINCLANTFLT/CINCPACFLTINST 3530.1
N37/N38
31 Jul 01

CINCLANTFLT/CINCPACFLT INSTRUCTION 3530.1

Subj: SURFACE SHIP AND SUBMARINE SEAMANSHIP AND NAVIGATION

Ref: (a) CNO/CMC joint ltr of 27 Jun 00
(b) U.S. Navy Regulations, 1990
(c) OPNAVINST 3120.32C
(d) CNO WASHINGTON DC 310135Z Jan 01
(e) COMNAVSURFLANT/COMNAVSURFPAC/COMNAVAIRPAC/
COMNAVAIRLANTINST 3530.4A
(f) COMSUBLANT/COMSUBPACINST 5400.29
(g) CNO ltr Ser N00/8U5000076 of 17 Mar 98
(h) OPNAVINST 3100.7B
(i) OPNAVINST 3530.3B
(j) OPNAVINST 9420.2
(k) CINCLANTFLTINST 3140.9A
(l) CINCPACFLTINST 3140.3A
(m) OPNAVINST 3140.55
(n) OPNAVINST 3500.39A

Encl: (1) ISIC Navigation Assessment Qualification Report

1. Purpose. To provide Fleet Commander in Chief (CINC) policy and guidance related to the safe navigation of surface ships and submarines, and direction for standard navigational input to common operational shipboard weapons and sensor systems. In addition, this instruction provides guidance on how the fleet will conduct its transition to electronic navigation.
2. Applicability. This instruction applies to all surface ships and submarines of the U.S. Atlantic and Pacific Fleets.
3. Policy. Basic Navy and Marine Corps position, navigation, and timing policy is defined in reference (a). General shipboard navigation duties and responsibilities are specified in references (b) and (c). Reference (d) establishes OPNAV N096 as Navigator of the Navy to assist in bringing new navigation technologies into the fleet. Specific Type Commander (TYCOM) guidance regarding shipboard navigation is detailed in references

31 Jul 01

(e) and (f). The Surface Ship Navigation Department Organization and Regulations Manual (NAVDORM), reference (e), provides procedural guidance for the safe navigation of surface ships and, as such, will be used to define minimum standards for navigation of surface ships. The Navigation and Operations Department Organization and Regulations Manual (NODORM), reference (f), specifies procedural guidance for the safe navigation of submarines and, as such, defines minimum standards for submarine navigation. The NAVDORM and the NODORM will provide a checklist for ships and submarines to clearly outline steps necessary for the legal use of electronic systems for navigation. The following policy is provided to assist Commanding Officers in carrying out their responsibilities.

a. General Navigation. The following general navigation guidance is highlighted for emphasis:

(1) Only Department of Defense (DOD) approved position/navigation systems and software may be used for legal navigation purposes. Other systems, if employed, may only be used as aids to maintain situational awareness.

(2) Navstar Global Positioning System (GPS), Precise Positioning System (PPS), is the primary external reference system for providing onboard systems with positioning, velocity, and time/time interval data to establish a common geographic reference for fleet operations.

(3) The DOD standard datum for navigation products (both electronic and paper) is WGS-84. Only National Imagery and Mapping Agency (NIMA) authorized Vector Product Format (VPF) electronic charts may be used with Navy certified Electronic Chart Display and Information Systems (ECDIS-N) for legal navigation without paper charts. Raster product format electronic charts may only be used for situational awareness except when authorized in accordance with paragraph 3i. See reference (g) for ECDIS-N policy. Extreme caution should be used if any electronic chart or DOD positioning source is used with datums other than WGS-84. Navigators must continually monitor navigation products, particularly paper charts, to determine the datum used. If WGS-84 is not used, then the required offsets must be taken into account.

b. Duties and Responsibilities. The Commanding Officer is responsible for the safe navigation and operation of the ship. TYCOMs shall establish the navigation responsibilities of the Executive Officer, Navigator, and other members of the navigation team, as guided by references (b) and (c). Any variations, by ship class, should be clearly defined.

31 Jul 01

c. Training and Qualifications. TYCOMs shall set forth the minimum training and qualification standards for the Navigator and all additional navigation watch standers. TYCOMs shall ensure that each ship's navigation personnel are properly trained in ECDIS-N compliant electronic navigation systems prior to the ship's certification for use of these systems in lieu of paper charts. Formal ECDIS-N training shall be incorporated into standard Fleet navigation training curricula, and be included as part of unit-level navigation training requirements.

d. Record keeping. Ship's deck log and bearing books shall be kept in accordance with references (h) and (i). TYCOM guidance shall be followed for any additional record keeping and record retention requirements. Electronic record keeping methods may be employed where legal requirements are satisfied. In most cases, this will require a write only storage medium and signature capability. For celestial navigation record purposes, the U.S. Naval Observatory's System to Estimate Latitude and Longitude Astronomically (STELLA) program log computer file may replace the Navigation Workbook, or a printed copy of the STELLA log file may be attached to the Navigation Workbook. Retention requirement for these records remains the same as for the manual calculations. The importance of keeping complete, concise, and accurate navigation logs and records cannot be overemphasized. They provide a legal and historical record of the ship's position, movement and employment. In addition to providing the recorded history of the ship, they form the legal record of the ship's business, positioning, and movement. All lessons learned from any incidents at sea should be quickly applied to navigation guidance and widely disseminated to all Commanders/Commanding Officers afloat.

e. Celestial Navigation. All surface ship and submarines shall maintain personnel proficient in the use of celestial navigation. Celestial navigation will remain a backup capability for other navigation methods. Use of the STELLA celestial navigation program is highly encouraged as it simplifies celestial computations and improves accuracy. This program uses DOD authorized algorithms and data.

f. Electronic charting requirements. Only systems that are certified in compliance with OPNAVINST 9420.2, reference (j), may be used for legal navigation with electronic charts. NIMA produced and maintained, or NIMA authorized electronic charts, may be used with these systems to replace paper chart requirements. The following additional criteria must be met before electronic charts can legally replace paper charts.

(1) Digital Nautical Charts (DNC®) database library portfolio and an electronic chart update capability must be fielded by NIMA.

(2) Unit-level certification must be obtained for ECDIS-N system installation and training/qualification programs. Reference (j), defines system installation certification requirements. TYCOMs shall define initial unit training/qualification crew certification requirements and direct the Immediate Superior In Command (ISIC) to use appropriately trained personnel to conduct navigation team examinations prior to issuing approvals for paperless navigation. Enclosure (1) is provided for use by TYCOMs for ISIC/ship approval to navigate electronically.

g. Chart allowance and maintenance. Unit map and chart library allowances are as specified in references (k), (l), and (m). Chart currency will be maintained in accordance with TYCOM guidance. All distribution of NIMA paper chart and navigation products is now accomplished through the Defense Logistics Agency (DLA). NIMA produced or NIMA approved charts shall be used for navigation purposes. All surface ships and submarines will receive the complete worldwide CD-ROM DNC® database library portfolio when completed. This portfolio will be corrected electronically using either a correction CD-ROM mailed to the ship, or an online Vector Product Format (VPF) Database Update (VDU) capability now under development at NIMA. DNC® Libraries within the NIMA portfolio are being brought up to date and into routine database maintenance in accordance with priorities established by the U.S. Navy. Ships should review chart requirements and allowances at least annually, and provide any requests for new products or changes to unit allowances to CINCLANTFLT (N37) or CINCPACFLT (N3WX) via the TYCOM.

h. Safety. There are no operational requirements that can relieve the Commanding Officer of the responsibility of navigating his or her ship in a safe and prudent manner. Principles of good seamanship and common sense shall always apply. While every contingency cannot be discussed, the procedures for handling unplanned and emergent situations should be clear to each member of the navigation team. This should include: Detailed pre and post-navigational briefs to review the duties and responsibilities of each watch stander; procedures for external and internal communications; problems and lessons learned from previous navigation evolutions; and application of Operational Risk Management (ORM), reference (n), during navigation operations. Navigators are advised to maintain visual navigation in addition to GPS, particularly when entering port with large scale DNC® coverage for the first time, rather than

GPS only navigation that is dependent on the geodetic transformation of the chart to WGS-84. Any discrepancies observed shall be reported to NIMA, and the respective TYCOM and CINC.

i. Use of non-NIMA charts. If planning to operate in an area where NIMA coverage is considered inadequate or non-existent, then appropriate non-NIMA charts (e.g. British Admiralty Charts) may be requested from NIMA after coordination with the TYCOMs and CINCs (CLF N37/CPF N3WX). Use of any foreign or domestic chart (paper or digital) for navigation other than NIMA's DNC® must be coordinated with NIMA's Navy Customer Support Division (DFN) and the Maritime Safety Information Center (MSIC) and approved by CLF (N37) or CPF (N3WX). Approval will only be granted when NIMA cannot provide an adequate NIMA chart in time to satisfy the operational requirement.

4. Responsibility

a. CINCLANTFLT and CINCPACFLT, in coordination with CINUSNAVEUR, COMUSNAVCENT, and the Navigator of the Navy, will maintain oversight of fleet navigation policy guidance and training. The Fleet Directors for Operations (N3s) will act as points of contact for this function.


b. TYCOMs will maintain current unit-level navigation policy and guidance in concert with Fleet CINC overarching policy guidance.

c. Ship's Commanding Officers shall execute navigation responsibilities as directed by TYCOM guidance and in accordance with the principles of good seamanship.

5. Action

a. TYCOMs shall maintain procedural instructions for the safe navigation of surface ships and submarines. This guidance will be updated as required. TYCOMs will issue approvals to ISICs/ships for electronic navigation.

b. Afloat Training Group Commanders will support TYCOMs in promoting safe navigation practices.



K. L. FISHER
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CINCLANTFLT/CINCPACFLTINST 3530.1

31 Jul 01

Distribution: (COMNAVSURFLANT)

SNDL Parts 1 and 2

21A1 CINCLANTFLT
26A1 Amphibious Group LANT
26B3 COMNAVSURFRESFOR
26E1 Amphibious Unit LANT
26DD1 Mobile Diving and Salvage Unit DET LANT
28B1 COMWESTHEMGRU and Cruiser Destroyer Group LANT
28C1A COMSURFWARDEVGRU Little Creek VA
28D1 Destroyer Squadron LANT
28J1 Combat Logistics Group and DET LANT
28L1 Amphibious Squadron LANT
29A1 Guided Missile Cruiser LANT (CG) (CGN)
29E1 Destroyer LANT (DD)
29F1 Guided Missile Destroyer LANT (DDG)
29AA1 Guided Missile Frigate LANT (FFG)
31 Amphibious Warfare Ship
32 Auxiliary Ships

Distribution: (COMNAVSURFPAC)

SNDL Parts 1 and 2

24E7 Commander Mine Warfare Command
26A2 Amphibious Group PAC
26V2 Landing Force Training Command PAC
26FF Mine Warfare Inspection Group
26000 Eastern Pacific Mobile Training Team
28A2 Carrier Group PAC
28B2 Cruiser Destroyer Group PAC
28C2 Surface Group PAC
28D2 Destroyer Squadron PAC
28E2 Surface Squadron PAC
28G2 Mine Squadron and Division PAC
28I2 Craft Opportunity Mine Squadron and Unit PAC (COOPMINERON
11 only)
28J2 Combat Logistics Group, Squadron & Support Squadron PAC
28L2 Amphibious Squadron PAC
29A2 Guided Missile Cruiser PAC (CG) (CGN)
29B2 Aircraft Carrier PAC (CV) (CVN)
29C2 Coastal Patrol Boat PAC (PC)
29E2 Destroyer PAC (DD) 963 Class
29F2 Guided Missile Destroyer PAC (DDG)
29AA2 Guided Missile Frigate PAC (FFG) 7 Class
30A2 Minesweeper, Ocean (Nonmagnetic) PAC (MSO)
30C2 Mine Countermeasures PAC (MCM 1) Class and Fleet
Introduction Team
31A2 Amphibious Command Ship PAC (LCC)
31B2 Amphibious Cargo Ship PAC (LKA)
31G2 Amphibious Transport Dock PAC (LPD)

31H2 Amphibious Assault Ship PAC (LHA) (LPH)
31I2 Dock Landing Ship PAC (LSD) 41 Class
31J2 USS MT VERNON (LSD 39) only
31M2 Tank Landing Ship PAC (LST)
31N2 Multi-Purpose Amphibious Assault Ship PAC (LHD)
32A2 Destroyer Tender PAC (AD)
32C2 Ammunition Ship PAC (AE)
32G2 Combat Store Ship PAC (AFS)
32H2 Fast Combat Support Ship PAC (AOE)
32N2 Oiler PAC (AO)
32Q2 Replenishment Oiler PAC (AOR)
32S2 Repair Ship PAC (AR)
32X2 Salvage Ship PAC (ARS)
32DD2 - Submarine Tender PAC (AS)
32EE2 Submarine Rescue Ship PAC (ASR)
32KK Miscellaneous Command Ship (AGF) (USS CORONADO only)
32QQ2 Salvage and Rescue Ship PAC (ATS)
FT35 Amphibious School (Coronado only)
FT43 Surface Warfare Officers School Command
FT106 Surface Warfare Officers School Pacific

Copy to:

21A2 CINCPACFLT
22A2 Fleet Commander PAC
26H2 Fleet Training Group
FT24 Fleet Training Center

Distribution: (COMNAVAIRLANT/COMNAVAIRPAC)

SNDL Parts 1 and 2
21A1 CINCLANTFLT
21A2 CINCPACFLT
21A3 CINCUSNAVEUR
22 Fleet Commanders
24A Naval Air Force Commanders
24D Surface Force Commanders
24E Mine Warfare Commanders
24G Submarine Force Commanders
24H Fleet Training Centers
24J Fleet Marine Force Commands
26H2 Afloat Training Group Pacific
26J Afloat Training Group Atlantic
26KKK Tactical Training Group
28A Carrier Groups
28B Cruiser Destroyer groups
29B Aircraft Carriers
42A Fleet Air Commands
42B Functional Wing Commanders
42J Carrier Air Wings

CINCLANTFLT/CINCPACFLTINST 3530.1

31 Jul 01

46B Marine Aircraft Wing
A3 CNO
A3 CNO (N096/N7)
FD1 Commander, Naval Meteorology and Oceanography Command,
Stennis Space Center
FD2 NAVAL Oceanographic Office, Stennis Space Center
FD4 Naval Atlantic Meteorology and Oceanography Center,
Norfolk
FD4 Naval Pacific Meteorology and Oceanography Center, San
Diego

Distribution: (COMSUBLANT/COMSUBPAC)

SNDL Parts 1 and 2

26G FBM OPTESTSUPPU TWO (2)
26VV Submarine Force Representative & Submarine Group Shipyard
Representative
28K Submarine Group & Squadron
29N Submarine (SSN) (4)
29P2 Auxiliary Research Submarine (AGSS) PAC (4)
29Q Fleet Ballistic Missile Submarine (SSBN) (12)
29S NR-1
32DD Submarine Tender (AS) (4)
36A Auxiliary Repair Dry Dock (ARD) (AFDM)
FT38 NAVSUBTRACENPAC (10)
FT54 NAVSUBSCOL (10)
FT85 TRITRAFAC Bangor WA (10)
FT85 TRITRAFAC Kings Bay GA (10)
FT95 SUBTRAFAC (10)

Copy to:

21A CINCLANTFLT, CINCPACFLT, CINCUSNAVEUR
A3 CNO (879)
FF5 NAVSAFECEN

ISIC Navigation Assessment Qualification Report

ADMINISTRATIVE MESSAGE

ROUTINE
R XXXXXXZ DEC 01
FM COMPHIBGRU TWO
TO COMNAVSURFLANT NORFOLK VA//N3/N6/N8//
USS SHIP
INFO CNO WASHINGTON DC//N096/N63/N633//
CINCLANTFLT NORFOLK VA//N3/N37/N435/N66/N72//
COMSECONDFLT
COMAFLOATRAGRULANT NORFOLK VA//00/01//
COMAFLOATRAGRU NORFOLK VA//N3//
BT
UNCLAS //N03530//
MSGID/GENADMIN/COMPHIBGRU TWO/-/JAN//
SUBJ/USS SHIP (HULL NUMBER) NAVIGATION ASSESSMENT QUALIFICATION
REPORT//
REF/A/DOC/OPNAV/15FEB01//
REF/B/GENADMIN/SPAWAR/XXXXXXZMMYY//
REF/C/DOC/CNSL-CNSP/17DEC99//
REF/D/DOC/CNSL-CNSP-CNAP-CNAL/12MAR99//
REF/E/DOC/CINCLANTFLT-CINCPACFLT/DDMMYY//
AMPN/REF A IS OPNAVINST 9420.2 (ECDIS-N CERTIFICATION INST). REF
B IS SPAWAR NAVCERT MSG. REF C IS CNSL-CNSPINST 3502.2E
(SURFTRAMAN). REF D IS CNSL-CNSP-CNAP-CNALINST 3530.4A (NAVDORM).
REF E IS CINCLANTFLT-CINCPACFLT INST 3530.1 (SURFACE SHIP AND
SUBMARINE SEAMANSHIP AND NAVIGATION INST).//
RMKS/1. IAW REF A, USS SHIP NAVIGATION EQUIPMENT CERTIFICATION
WAS COMPLETED ON XX NOV 01 AND IS DOCUMENTED AS REF B.
2. IAW REFS C AND D, A CREW PROFICIENCY NAVIGATION ASSESSMENT WAS
COMPLETED ON XX DEC 01. DETAILS OF THE ASSESSMENT WERE DISCUSSED
WITH THE COMMANDING OFFICER.
3. IAW REF E, USS SHIP IS AUTHORIZED FOR UNRESTRICTED NAVIGATION
OPERATIONS INCLUDING USE OF ECDIS-N.//
BT
NNNN